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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,051	11/15/2000	Stepan B. Sokolov	5181-60300	4377

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EXAMINER
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GROSS, KENNETH A

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/714,051

Applicant(s)

SOKOLOV, STEPAN B.

Examiner

Kenneth A Gross

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This action is in response to the Request for Reconsideration filed on November 6<sup>th</sup>, 2003.
2. Claims 11-54 remain rejected under 35 U.S.C. 103(a).

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11, 13-19, 21, 23-28, 30-38, 40-46, and 48-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent Number 6,292,936) in view of "The IR to VMx86 Translation Module Specification" by Chris Lattner, December 1999 (hereinafter Lattner).

For specific rejections of Claims 11, 13-19, 21, 23-28, 30-38, 40-46, and 48-54 see the office action mailed August 1<sup>st</sup>, 2003.

3. Claim 12, 29, 39, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent Number 6,292,936) in view of "The IR to VMx86 Translation Module Specification" by Chris Lattner, December 1999 (hereinafter Lattner), and further in view of "The Principles of Computer Hardware, Third Edition" by Alan Clements, 2000 (hereinafter Clements).

In regard to Claim 12, Wang and Lattner teach the method of Claim 11, but do not teach that the instructions are stored on a stack, and the instructions are popped from the stack during

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the executing step. Clements, however, does teach using the stack data structure to hold instructions that are executed by popping the instruction off of the stack. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to perform the detecting, generating, interpreting, executing, and accessing steps of Claim 11, as taught by Wang and Lattner, where the instructions are stored on a stack, and the instructions are popped from the stack during the interpreting and executing steps, as taught by Clements, since this is an intuitive way to parse instructions in a computer system. Claims 29, 39, and 47 correspond directly with Claim 12 and are rejected for the same reasons as Claim 12.

4. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent Number 6,292,936) in view of "The IR to VMx86 Translation Module Specification" by Chris Lattner, December 1999 (hereinafter Lattner) and further in view of "Load-time Structural Reflection in Java" by Shigeru Chiba, June 2000 (hereinafter Chiba).

For specific rejections of Claims 20 and 22, see the office action mailed on August 1<sup>st</sup>, 2003.

### ***Response to Arguments***

5. Applicant's arguments filed on November 6<sup>th</sup>, 2003 have been fully considered but they are not persuasive.

The applicant argues that neither Wang nor Lattner teach a method "wherein the platform-independent programming language representation is executable to produce results in accordance with the original sequence of script language instructions." (Page 4, lines 4-11). However, Latter does teach using a virtual machine to generate assembly instructions, indicating

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that the virtual machine generates some internal platform-independent representation of a source code before translating the representation to the architecture specific assembly code.

The applicant further argues that Lattner does not suggest, “representing script instructions as executable platform-independent programming objects” (Page 4, 20-21). However, Lattner does teach Java objects representing platform-independent instructions, since the objects are inputted to a Java Virtual Machine and can be run on any platform. It is not necessary to specify that Lattner teach representing script instructions, since Lattner already discloses the advantage of representing instructions as platform-independent programming objects.

The applicant further argues that the combination of Wang and Lattner lacks motivation, because Wang discloses generating instructions for multiple platforms, whereas Lattner discloses the generation of 80x86 assembly language instructions, and hence only one type of processor (Page 5, lines 1-3). However, the motivation lies in the fact that Wang teaches an intermediate platform-independent representation and Lattner teaches a platform-independent representation of individual commands and programming language objects. Hence there is a benefit to storing commands and individual objects, and it would be beneficial to store the commands taught in Wang in objects taught by Lattner.

In regard to the rejection of Claim 12, the applicant states that parent Claim 11 is rejected under both Wang *and* Lattner. The applicant correctly points out that the rejection of Claim 12 is improper, and Claims 12, 29, 39, and 47 are now rejected under 35 U.S.C. 103(a) under Wang, Lattner, and Clements.

Finally, the applicant claims that Clements teaches assembly language programming for the 68K family, specifically a computer hardware stack, which is different from a stack data

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structure (Page 5, lines 28-30). The examiner disagrees. The stack presented hold assembly instructions and, hence, is represented as a software concept. All stacks can be represented and implemented in hardware; however, this is not what Clements is teaching. Clements is teaching storing instructions on a stack, and hence it would be obvious to store the platform-independent programming language objects, which are representations of instructions.

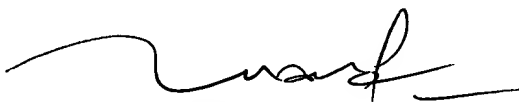
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Gross whose telephone number is (703) 305-0542. The examiner can normally be reached on Mon-Fri 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q Dam can be reached on (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

KAG

  
**TUAN DAM**  
**SUPERVISORY PATENT EXAMINER**